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ON SOME NORTH AND SOUTH AMERICAN TINGIDAE (HEMIP.)*

By Carl J. Drake

Corythucha baccharidis n. sp.

Antennae clothed with a few long hairs. Rostrum reaching almost to the end of the rostral sulcus. Pronotum with the lateral carinae short, curved, strongly raised, each composed of two cells and terminating about equidistant from the hood and median carina; median carina strongly elevated anteriorly, rather short, not quite half as long as the hood, its height a little more than half its length, composed of five or six cells (two rows anteriorly). Paranota with the reticulations smaller than those of the hood, the outer margins armed with a double row of spines (extra submarginal row as in *C. mcelfreshi*). Hood prominent, broad, moderately elevated, slightly constricted at the middle, not strongly narrowed anteriorly, slightly broader than high, the width about seven-tenths of the length. Costal margins of the elytra slightly incurved or nearly straight, the spines moderately long and extending to the basal third. Tumid elevations of elytra large and rounded; costal area largely triseriate (two to three rows of areolae). Length (male), 4.1 mm.; width, 2.8 mm. The female is a little larger and broader than the male.

General color yellowish white, the fuscous markings more prominent than in *C. mcelfreshi.* Most of the nervelets of the hood, save sides of anterior portion, a large spot on median carina, a spot on the tumid elevation, part of sutural area, and the basal and apical cross-bands of elytra fuscous. The apical band has a rather broad hyaline streak and forms almost a double cross-band. Areolae hyaline, partly clouded in the fuscous areas. Body beneath dark reddish brown or black.

Several specimens, collected on *Baccharis* sp. at Paradise Keys, Fla., Feb., by Dr. E. A. Schwarz; one specimen, Miami, Fla., Aug. 2, 1902, by Mr. Russell. *Type* (male, Nat. Mus., No. 25,183), Paradise Keys, Feb. 19, E. A. Schwarz. The *paratypes*

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show considerable variation in color. In general appearance and color, the species closely resembles *C. mcelfreshi* Drake *(type* and 3 other specimens before me), but readily separated from it by the much shorter lateral carinae, less constricted hood, larger tumid elevation of the elytra, shorter median carina and triangular process of pronotum, and the more prominent color markings.

Leptostyla malpigheae n. sp.

Akin to *L. tumida* Champion, but easily distinguished by its much smaller and less elevated hood and the median carina. Length, 3.91 mm.; width, 1.85 mm.

Antennae long and slender; first segment a little longer than the fourth and almost three and a half times the length of the second; third segment long, three and two-thirds times the length of the fourth. Head with five rather long slender spines, the anterior spines (especially median) usually longer than the latero-posterior ones. Rostrum reaching almost to the end of rostral sulcus, the rostral laminae strongly elevated. Hood moderately large, very much smaller than in *tumida;* the anterior margin of head, the tips of the spines and the entire triangular portion of pronotum not concealed by the hood; the length almost three times its height. Median carina slightly shorter than hood and almost as highly elevated, the length a little greater than its height, strongly and angularly raised slightly in front of the middle (two to three rows of cells). Lateral carinae very short, each composed of a long triangular cell. Paranota greatly dilated, recurved and rounded, with four rows of areolae at widest part; the areolae large. Elytra moderately elongate, narrow at the base, widening distally, very similar to *tumida;* costal area with one row of areolae at the base, increasing to three or four at the middle, the areolae large; subcostal area mostly biseriate, usually one row at the base, discoidal area short, rather broad, with three rows of areolae, the anterior side more strongly raised.

General color testaceous, the areolae iridescent and hyaline. Median spine on the head, a spot on median carina, and an oblique fascia, slightly rounded and occupying two depressed rows of areolae on elytra, fuscous. Marginal nervures of paranota and some of the nervelets along the margin of costal area fuscous. Legs and antennae testaceous, the tips of tarsi and (usually) inner side of first antennal segment infuscated.

Many nymphs and several adults, taken on *Malpigea urens* Linn. at San Diego de los Bano, Pinar del Rio, Cuba, by Johnston Ballon, March 27, 1921. *Type* (male) No. 25,184 U. S. N. M. This insect is also somewhat allied to *L. mcelfreshi* Drake from Hayti, but the latter is much larger, and differs greatly in the structure of the hood, paranota, carinae and elytra.

Megalocysta championi n. sp.

Readily separated from *M. pellucida* Champion by its much smaller, less elevated hood (not covering any part of triangular

process), broader paranota and well developed carinae. Length, 6.57 mm.; width, 3.7 mm.

Antennae rather long, the third segment three and a half times the length of the fourth. Pronotum tricarinate, the lateral and median carinae well developed, the former diverging posteriorly. Paranota moderately wide, rounded, biseriate, the areolae rather large. Bucculae not contiguous in front. Hood moderately large, not covering the anterior portion of the head nor any part of the triangular process of pronotum, the length about twice its height, the areolae very large and irregular. Elytra faintly constricted a little beyond the middle, broadly rounded at the tips; costal area from three to four seriate at the widest part, the areolae large and irregularly arranged; subcostal area mostly triseriate, the discoidal area raised, with four rows of areolae at widest part, the areolae about equal in size to those of subcostal area. The nervures of hood, paranota and elytra are large and much coarser than in *pellucida*.

General color yellowish brown, with a few fuscous markings. Areolae of hood fuscous, non-transparent. Legs and antennae yellowish brown, the tips of tarsi and apical segments of the latter dark fuscous. Paranota and elytra with the areolae mostly hyaline (a few cells near the apex of the elytra partly clouded), some of the nervelets partly fuscous. Body beneath dark yellowish brown.

One specimen, a female, from Brazil. *Type* in my collection. This species somewhat modifies the generic description of *Megalocysta* Champion, the bucculae being either closed *(pellucida)* or open *(championi)*. The lateral carina, omitted in the original description, are only slightly developed and are entirely covered by the hood. Specimens of *pellucida* from Panama (collected by Dr. E. A. Schwarz) differ from the original description, and a cotype before me, in having the paranota partly biseriate and lateral carinae slightly more developed. Named in honor of Dr. G. C. Champion, who founded the genus.

Galeatus schwarzi n. sp. (Fig. 1)

Very distinct and readily separated from *G. peckhami* Ashm. by its much smaller size, the much larger hood and more strongly inflated posterior triangular portion of pronotum and differently formed paranota. Length, 2.95 mm.; width, 1.22 mm.

Head armed with long, rather stout, blunt spines; two anterior spines, one on each side of median line porrect or with the tips more or less converging; median and latero-posterior spines appressed closely to the head. Antennae slender, rather long, the first segment about twice the length of the second; third segment slightly curved, one and a half times the length of fourth, the latter clothed with numerous fine hairs. Rostrum reaching to the end of rostral sulcus. Pronotum smooth, slightly shining, not very closely punctured, tricarinate; lateral carinae very short, each composed of a single, flap-like cell; median carina very strongly foliaceous, short, about half as long as the head, connected with the median nervure of the

latter near the middle and extending upward to join the median nervure of the inflated posterior portion of pronotum near the crest, composed of two long cells, the anterior cell very narrow. Hood large, the greatest height, length and width about equal, extending a little in front of the head, with a distinctly impressed area in front, the areolae large and minutely sculptured. Inflated posterior portion of pronotum large, about as high as the hood, the areolae large and minutely sculptured. Paranota strongly reflexed, short, its height noticeably less than that of the [illegible], composed of four very wide and short areolae and one long narrow [illegible] in front of the others. Elytra much longer than the pronotum, slightly constricted beyond the middle, the areolae very large; costal area uniseriate, with an extra triangular cell at the constriction, subcostal area uniseriate. Wing considerably longer than the abdomen.

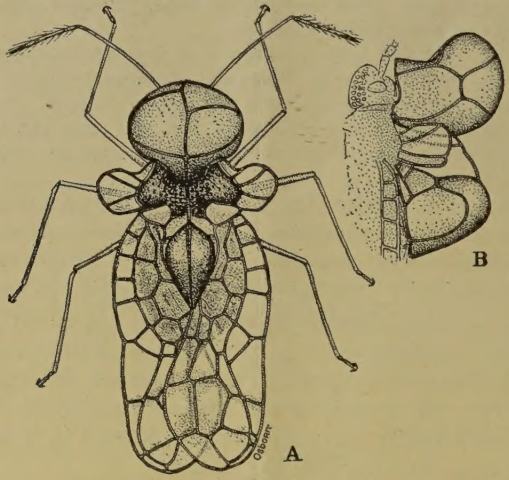

Fig. 1—*Galeatus Schwarzi* Drake.

General color fuscous-brown. Nervures of lacy portions brown and somewhat infuscated, some of the areolae slightly smoky and cloudy. Legs and antennae lighter, the tip of the latter fuscous.

Two females and a male, collected at Paraiso, Canal Zone, Panama, Jan. 21, 22 and 23, 1911, by Dr. E. A. Schwarz. The specimens are all macropterous; *type* (female, Jan. 23) No. 25,151 U. S. N. M. This species has the general appearance of *Dicysta* Champ. but the very large cell readily distinguishes it from the members of that genus.

Gargaphia mexicana n. sp.

Differing from *G. amorphae* Walsh and *G. tiliae* Walsh in the angularly expanded paranota, the somewhat cone-shaped hood and the more strongly raised point (occupying two cells a little

in front of the middle) of the median carina. Length, 4.15 mm.; width, 2 mm.

Antennae long, clothed with numerous long hairs; first segment two and a half times as long as the second; third segment very slender, two and a third times as long as the fourth, the latter a little longer than the first and second conjoined. Rostrum reaching almost to the end of rostral sulcus, the rostral laminae strongly elevated. Paranota angularly expanded, with four rows of areolae at its widest part. Hood somewhat conical, moderately elevated. Carinae rather strongly elevated, each composed of a single row of rather large areolae; median carina with a strongly raised arched place a little in front of the middle (much more so than in *tiliae* or *amorphae*). Costal area of the elytra with four rows of areolae at the widest place; subcostal area biseriate; discoidal area with four rows of areolae at widest part, not quite so broadly expanded at the apex as in *amorphae*. Paranota, carinae, pronotum moderately hairy. Basal portion of elytra sparsely hairy.

Antennae and legs brownish, the tarsi and fourth antennal segments black. Head and eyes black, the spines brown or testaceous. Thorax beneath black, the rostral laminae and bucculae yellowish brown. Abdomen beneath reddish brown to nearly black. Hood, carinae and elytra testaceous, four or five oblique nervures of the latter and a small spical spot in discoidal area brown or fuscous. Pronotum blackish.

One female and three male specimens, taken at Tampico (xii-5) and Tamos (xii-7-09) Mexico, by F. C. Bishop. *Type* No. 25,187 U. S. N. M. (female) from Tampico, Mexico.

Gargaphia tiliae Walsh

This species is identical with *G. fasciata* Stal from Illinois. Gibson, Trans. Amer. Ent. Soc., XLV, 1919, p. 191,196, has erroneously treated *fasciata* Stal (specimens from Alabama det. *fasciata* by Champion) and the latter cannot be given specific rank. *Tiliae* is a rather variable species in size, length of spines on the head and color of elytra. In many specimens there is no darkening of the nervures (forming a transverse fascia) of the elytra. The costal and subcostal areas are variable in size and number of rows of areolae.

Gargaphia munda Stal

This is a common and widely distributed species in South America. *Leptostyla lineifera* Walker *(fide* Blair of British Museum) is a synonym of *munda*. *G. magna* Gibson is a very closely related species.

Gargaphia condensa Gibson

G. condensa Gibson and *G. carinata* Gibson are identical and were described from the same series of specimens from Santa Rita Mountains, Arizona. *Condensa* is very closely related to *G. iridenscens* Champion.

Acanthocheila kahavalu Kirkaldy

In the Kirkaldy Collection, National Museum, Washington, D. C., there is one example of this insect from Challanga, Peru, labeled *"type"* and I designate this specimen as the *type* (Nat. Mus. No. 25,152) of the species. I have also examined the following specimens from Bolivia; two from Cochabamba, one from Marcapata and three from Pachitea.

Leptodictya leinahoni Kirkaldy

The genus *Hanuala* of Kirkaldy, Bull. Soc. Ent., France, 1905, p. 216, is identical with the genus *Leptodictya* of Stal and, as the latter has priority, *leinahoni* should be transferred to this genus. In the Kirkaldy Collection (Nat. Mus.) there is a single specimen from Mapiri, Bolivia, labeled *"type"*, which I designate as the type (No. 25,062 U. S. N. M.) of the species. I have also examined specimens from Peru (Cozoo, Coll. Gay) and Bolivia (two from Mapiri, one from Lopax (Yungas), and ten from Cochabamba).

Acvsta brasiliensis n. sp.

Very distinct and distinguished at once from the known species of the genus by the biseriate costal area and the very narrow carina-like paranota. The head is armed with five spines, the antero-lateral ones short and projecting forward. Length, 4.3 mm.; width, 2.1 mm.

Antennae slender, rather long, the third segment two and a half times the length of the fourth. Rostrum reaching to the meso-metasternal suture. Head short, very sparsely pubescent. Pronotum coarsely punctured, narrowed anteriorly, moderately clothed with rather long, fine pubescence, tricarinate, the lateral carinae present only on the posterior portion of the pronotum, the median carina very distinct and prominent. Paranota very narrow, extending along the entire margin of pronotum, composed of a single row of very tiny areolae, the posterior two or three cells a little larger than the others. Elytra very sparsely and finely pubescent, considerably longer than the abdomen, each elytron with two raised prominent laterally compressed, point-like structures; costal area uniformly biseriate, the areolae rather large and mostly pentagonal; subcostal area with four rows of areolae; discoidal area very distinct, with four to five rows of areolae at its widest part, and areolae of discoidal and subcostal areas small and subequal in size; sutural area broad, the areolae becoming larger distally. Wings a little longer than the abdomen. Male claspers large and strongly curved.

Color: Head black, the spines testaceous. Eyes reddish or black. Antennae testaceous, the spical segment fuscous. Pronotum dark brown, the paranota, collum and posterior portion of triangular process, and the median carina, except central portion, testaceous. Elytra testaceous, the four prominent raised point-like structures brown with fuscous tips, a large

spot in discoidal area, and a slightly smaller one (just opposite) in subcostal area, brown. These two spots, formed by embrowned nervures, form an irregular transverse fascia, extending from the costal area to the inner margin of discoidal area thru the raised point-like protuberance. Body beneath dark brown or blackish, the abdomen more or less tinged with red.

Type (female) No. 25,185 U. S. N. M. from Para, Brazil, collected by C. F. Baker. Some of the paratypes have the paranota, lateral carinae and most of the median carinae dark brown like the pronotum. One specimen has the subcostal area composed largely of four rows of areolae instead of three.

Leptoypha morrisoni n. sp.

Somewhat akin to *L. binotata* Champ., but readily separated from it and from allied forms occurring in the United States by the narrow, uniseriate subcostal area; the costal area is extremely narrow and strongly reflexed, carina-like, the areolae very tiny and mostly indistinct.

Elongate and narrow. Head smooth, somewhat shining, the latero-posterior spines short and the three anterior spines wanting. Rostrum reaching a little beyond the meso-metasternal suture. Antennae rather long, moderately stout; first segment a little shorter and slightly thicker than the second, the latter slightly enlarged towards the tip; third segment slightly curved, almost two and one-third times as long as the fourth, the latter slightly more than twice as long as the first and second conjoined. Pronotum rather coarsely punctured, the lateral carinae wanting, the median carina distinct but only faintly raised. Elytra elongate, widest at a little beyond the base, faintly constricted beyond the middle; discoidal area broad, with about eight or nine rows of areolae at its widest part, the areolae of subcostal and discoidal areas about equal in size; sutural area broad, the areolae becoming larger distally. The pronotum (except disc), especially the posterior triangular portion, moderately and finely pubescent, the pubescence on the elytra rather sparse.

General color brownish. Antennae brown, the first, second and distal two-thirds of fourth segments infuscated. Pronotum reddish brown, the collum and apex of triangular process lighter, the deeply impressed calli black. Elytra brown or yellowish brown, with numerous veins in sutural area, and usually a large spot near the middle and another smaller one near the apex of discoidal area fuscous. Eyes reddish or black. Body beneath dark brown or blackish, sometimes slightly tinged with red.

Length (male) 3.11 mm.; width 1.05 mm. The female is more robust, larger, and the fuscous markings are not as prominent. Described from 3 males and one female, the latter with the head wanting.

San Pedro de Macoris, Rep. Dom., W. I., collected July 15, 1917, by Mr. Harold Morrison. *Type* (male) No. 25,150 U. S. N. M. This species is named in honor of Mr. Harold Morrison, who has

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The
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"LITTLE GATEWAYS TO SCIENCE."—We trust that all who have received the previous issue of the *Entomologist* have ordered copies of "Hexapod Stories" and "Bird Stories," published by the Atlantic Monthly Press, Boston, Mass. The author of these two books, Miss Edith M. Patch, is one of only a few lady entomologists in America and we are glad to advertise her books. We hope that the membership of the Florida Entomological Society and subscribers to the *Entomologist* will respond heartily. Prices, postpaid, are 90 cents and $1.00, respectively.

THE TORONTO MEETING.—The editor has just returned from the meeting of the Am. Ass. for the Advancement of Science at Toronto. Meeting with the Association, as usual, were the American Entomological Society and the Am. Association of Economic Entomologists. Some papers on entomological subjects were read at the meetings of the Ecological Society of America which also held one joint meeting with the entomologists as did also the phytopathologists. The meeting was quite successful, over 1800 being in attendance, and favored with very mild weather. Other members of our Society in attendance were Prof. Herbert Osborn, H. L. Dozier of Ohio State and Dr. Carl J. Drake of Syracuse, N. Y., and Mr. C. S. Weigel of U. S. Bureau of Ent. Another former Floridian met was Dr. Sherbakoff of the Tennessee station.

The Entomologists' dinner on Friday evening was a particularly enjoyable affair. As Toronto was the birthplace and 1921 the 32d anniversary of the formation of the Association of Economic Entomologists the addresses were largely of a reminiscent nature. The circumstances of the founding of the Association were recounted by some of the "old imagoes" for the benefit of the "second instar nymphs." A "nymph," a lepidopterist, was

heard to observe that some of the "imagoes" seemed to be badly rubbed.

As retiring president of the A. A. A. S. Dr. Howard on Tuesday evening gave a stimulating address on the "War Against Insects." His theme was that insects were struggling with man for the mastery of the earth and that it behooved man to be on the alert lest the issue of the war be against him. His address has been printed in Science. Prof. Wm. Bateson of England lectured to the Association on Wednesday evening. He took the position that while the principle of evolution was thoroly established there was still much doubt as to the factors responsible for the origin of species and that Darwin's theory of the origin of species thru natural selection of small fluctuating variations had not been proven. Along this same line the zoologists had much to say about orthogenesis.

The address of the retiring president of the Economic entomologist, Prof. Geo. A. Dean, was on the subject of cooperation. Prof. Sanders of Pa. was elected president for the Boston meeting next year. It was voted to hold the 1923 meeting in Cincinnati and the 1924 meeting in Washington. For the 1925 meeting a western city, "perhaps Kansas City," was suggested. Space forbids our noting the many interesting and valuable papers presented. One was a highly amusing moving picture of the life history of the ox warbles. This film is owned by the U. S. D. A. and perhaps could be secured by our county agents.

DUSTING GROVES AT THE RATE OF SIX ACRES PER MINUTE

Houser Outflies County Agent Briggs

A very interesting and suggestive illustrated paper was given at the Toronto meeting by Prof. Houser of the Ohio station on the successful dusting with lead arsenate from an aeroplane of a grove of catalpa trees infested with the catalpa sphynx. It was Prof. Houser's contention that, considering the rapidity of the work, dusting tall trees from an aeroplane might under some circumstances prove to be the cheapest method in spite of the high cost of aeroplanes.

How about dusting groves of seedling orange trees for rust mites? One plane might take care of most of the groves of the Citrus Exchange for instance. One member remarked that entomologists must now substitute for their time-honored slogan adopted from the ministry "Let us spray," one adopted from the housewife, "Get up and dust."

MYCODIPLOSIS MOZNETTEI n. sp.

By E. P. Felt, Albany, N. Y.

The small midges described below were received from Mr. G. F. Moznette of the Federal Bureau of Entomology accompanied by the statement that they were reared from the pyriform scale, *Pulvinaria pyriformis* Ckll., as many as three individuals being reared from one scale insect. The larvae devour the eggs of the female scale and when full grown construct small cocoons underneath the scale of the host. One slide containing a number of females was labelled Miami, Fla., November 26, 1921, G. F. Moznette, Avocado. The other slide bears the date of December 2, 1921, and similar information.

The species appears to be closely related to three other predaceous forms in this genus, namely, *M. acarivora* Felt, *M. coccidivora* Felt and *M. pulvinariae* Felt, from all of which it is easily separated by the distinctly shorter stems of the male flagellate antennal segments.

Male: Length 1.25 mm. Antennae a little longer than the body, thickly haired, probably yellowish brown, 14 segments, the fifth with the stems each with a length one half greater than the diameter, terminal segment, basal enlargement roundly disk shape, the basal portion of the stem short, the distal enlargement broad, broadly rounded, obtuse apically: Palpi, first segment subquadrate, the second with a length about twice its diameter, the third more slender; body and halteres probably pale yellowish; legs probably pale straw; Genitalia, basal clasp segment moderately stout; terminal clasp segment about one half the length of the basal clasp segment, moderately stout, dorsal plate longer, deeply and narrowly emarginate, the lobes broadly rounded; the ventral plate long, broadly rounded apically.

Female: Length 2 mm. Antennae about three fourths the length of the body; sparsely haired, probably pale straw, fourteen sub-sessile segments, the fifth with a stem one fourth the length of the cylindric basal enlargement which latter has a length two and a half times its diameter; terminal segment with a length three times its diameter and apically a short, obtuse process; palpi nearly as in the male; body "pinkish"; halteres presumably pale yellowish; the legs probably pale straw; ovipostor about one fourth the length of the abdomen, stout, the lobes broadly rounded apically.

Type Cecid. A. 3217, N. Y. State Museum.

FLORIDA LOSES DR. DAVIS

Dr. H. S. Davis, Professor of Zoology, including entomology, at the University and a charter member of our society, has resigned to accept a position with the Bureau of Fisheries. Dr. Davis is an authority on the protozoan diseases of fishes and has been spending his summer vacations with the Bureau for many years.

Dr. Davis is a fine teacher and the University and our Society will miss him greatly. He will reside in Washington. His place will be taken by Dr. J. S. Rogers, a graduate of the University of Michigan, now teaching in Grinnell, Ia.

Science Hall, Nov. 28, 1921.

The regular monthly meeting of the Florida Entomological Society was called to order at 4:30 P. M., President Watson in the chair. Members present: Lord, Cody, Newell, O'Byrne, Montgomery, Burger, Merrill, Goodwin, Lazonby, Stirling, Beyer, Davis and Chaffin.

Application of Miss Miller of Eustis for membership was received and she was duly elected.

It was moved and passed that a Committee of three be appointed to confer with a similar committee of the Horticultural Seminar, as to the advisability of a fusion of the two societies or an arrangement for joint meetings. Dr. J. H. Montgomery, Dr. O. F. Burger and Dr. E. W. Berger were appointed on the committee. The committee was instructed to report at next regular meeting.

It was moved and passed that the society give Dr. H. S. Reed of California a smoker when he visits Gainesville next month, and that this smoker take the place of the regular December meeting of the society.

The paper of the evening was: "Bean Jassids and Their Control" by A. H. Beyer. Mr. Beyer illustrated his talk with stereopticon views and it was both valuable and interesting, showing the results of a great deal of careful work, and illustrating the value of spraying for this insect. He also showed the spraying attachment that he invented which will thoroughly wet both sides of the leaves.

There being no further business the society adjourned.

J. CHAFFIN, *Secretary.*

SMOKER FOR DR. REED

Dr. H. S. Reed, physiologist of the Citrus Experiment Station of California, located at Riverside, California, passed through Gainesville and was entertained at a joint meeting of the Entomological Society and the Horticultural Seminar on Dec. 13. Dr. Reed is spending a part of his sabbatical leave studying citrus conditions in both North and Central America and perhaps part of South America. Dr. Reed came to Florida from Mexico, where he spent four weeks in going over the most highly developed citrus regions in that country.

Dr. Reed spoke to the two societies on the results of his experimental work at Riverside, going deeply into the causes of the development or inertia of buds, a problem which strikes at the very fundamentals of pruning practice.

While Dr. Reed was in Florida it was made possible for him through the courtesy of the State Plant Board to visit the different citrus sections of our State, going down the ridge to the East Coast. He spent a part of his time through the northern part of the district and a few days in the Pinellas Peninsula. Before he left the State a letter was received in which he expressed his appreciation of the kindness shown him while in the State and also giving his impressions of our citrus section. There were two things that impressed him very much; first, the great amount of new groves planted in the last five years, and secondly, the amount of disease present in all old groves. In fact, it was his impression that the life of an orange tree in Florida was limited by disease. Two diseases which he spoke of as being of the greatest importance in the State were Melanose—Stem-end Rot and Dieback.

Dr. Reed's work in California is studying the effects of pruning on both citrus and deciduous fruit trees. He is making a quantitative study in groves, and the effects that pruning may have on the tree if practiced at various seasons throughout the year.

O. F. BURGER.

ON SOME NORTH AND SOUTH AMERICAN TINGIDAE (HEMIP.)

(Continued from page 43)

collected many Tingidae and other Hemptera in the West Indies.

Hesperotingis (Melanorophala) duryi confusa new variety.

Differs from *M. duryi* O. & D. in having the third antennal segment strongly swollen towards the apex and the pronotal carinae slightly more

elevated. General color and other characters as in *duryi*. Only brachypterous specimens of *duryi* and var. *confusa* known. The principal nervures of the elytra strongly costate and the reticulations extremely irregular in the variety as well as in the typical form. The third antennal segment in *duryi* only very slightly swollen towards the apex. Described from six specimens (short-winged females), collected at Marfa and Chisos Mts., Texas, by Mitchell and Cushman. Type, No. 25,186 U. S. N. M., taken at Marfa, Texas, June 5, 1908.

This new variety somewhat confuses our conception of the genera *Melanorophala* of Stal and *Hesperotingis* of Parshley. The tips of the elytra in the brachypterous forms of Stal's species of *Melanorophala—clavata, lurida (obscura* Parshley), and *uniformis*—are distinctly divaricate at the apex. If the above species were named correctly by Osborn and Drake, it seems quite probable that *lurida* may not be more than a variety of *clavata*, and *uniformis* perhaps a synonym of *lurida*. However, it is probably best to consider Stal's species distinct until the types are examined. The short-winged form of *M. infuscata* Parshley and the long-winged form of *duryi* are unknown to the writer. In short-winged specimens of all the species belonging to the genus *Hesperotingis* (specimens of every described species before me), as in *M. duryi*, the elytra are non-divaricate at the tips. The elytra in the macropterous form of *H. illinoiensis* Drake are more broadly rounded at the tips than in similar specimens of *Melanorophala*. Thus, the shape of the third segment of the antennae makes *duryi* fall in the genus *Melanorophala* and the var. *confusa* is the genus *Hesperotingis*. On account of the non-divaricate wings of *M. duryi* it is perhaps advisable to transfer this species to the genus *Hesperotingis* and to treat the two genera as distinct until more specimens of *duryi* and var. *confusa*, including the males and long-winged forms, are secured. The long-winged form of *H. antennata* Parsh. has been described by Parshley.

Hesperotingis occidentalis n. sp.

This species is very similar and closely allied to *H. illinoiensis* Drake, but easily distinguished from it by the slightly shorter antennae, the smaller spines on the head, and costal area contains only one complete and partial series of areolae. Length, 5.1 mm.; width, 2.23 mm.

Brachypterous form: Third segment of the antennae slightly curved and a little thicker and more abruptly swollen towards the apex than in *illinoiensis*. Paranota parallel, each composed of a single row of small areolae. Rostrum reaching to the meso-metasternal suture. Costal area composed of one complete and a partial row of areolae (two rows near the

base and towards the apex and one row along the middle (greater portion). Other characters very much like those in *illinoiensis*.

General color above yellowish brown. Body beneath and legs dark reddish brown. Antennae reddish brown, the fourth and almost distal half of the third segment blackish.

Two specimens. *Type* (female) from Colorado in my collection. *Paratype* (female) labeled "N. W., Uhler Coll." in the National Museum. The latter specimen has the right antenna broken. The number of rows of areolae in the costal area will at once distinguish *H. occidentalis* from *H. infuscata* Parshley from Colorado, also from *H. antennata* Parshley or *H. illinoiensis* Drake. More specimens may make *occidentalis* a variety of *illinoiensis*, but on account of the slightly more elevated carinae and the marked difference in costal area it seems best to consider them as distinct species.

Teleonemia (Cantacader) chiliensis Reed

I have examined specimens of this insect determined by the late Dr. Carlos E. Reed of Chile and the species belongs to the group of *Teleonemia* having the broad costal area. I also have a specimen from Ocampa, near Santa Fe, Argentine.

Coleopterodes liliputianum Signoret.

The genus *Solenostoma* of Signoret, Ann. Soc. Ent. Fr. Ser. 4, 111, 1863, p. 575, erected for *S. liliputianum* Sign. (*l. c.*, p. 575, pl. XIII, fig. 27), is preoccupied by a genus of fishes—Rafinesque, Analyse de la Nature ou Tableau de l'Universe et des Corps Organises, 1815, p. 90. Hence, the genus *Coleopterodes* of Philippi, Stetten. Ent. Zeit., XXV, 1864, p. 306, founded for *C. fuscenscens* Phil. (*S. liliputianum* Sign.) becomes the valid name for the genus. It is also interesting to note that Latreille, 1802, used *Solenostoma* for an order of *Acarina* and then many years later Brady and Robertson, 1873, for a genus of *Copepoda*. Brady, 1880, substituted *Acontiophorus* for *Solenostoma* in the copepods. As the genus *Fistularia* of Linnaeus, 1758, has priority over *Solenostoma* in the Fishes, the latter has lost out entirely and cannot be made a valid generic name.

FIG. 1. *Galeatus schwarzi* n. sp.; *a*, dorsal aspect; *b*, lateral aspect of hood and pronotum. Drawn by Mr. W. P. Osborn.

AN APPRECIATIVE NURSERYMAN

On July 20th the Nursery Inspector sent a circular letter to all the nurserymen in the state, from which we quote the following:

"Nurserymen in one or two sections of the State have been

anxious for a modification of Rule 40. They have felt that local movements of uncovered nursery stock should be permitted. We recently visited one of these sections and made a tour of the streets in the principal town. We stopped and examined the trees that were overhanging the streets in the principal thoroughfares and in about one half hour's time we found 15 different scale insects and three different species of mealy bugs on these trees. In two cases the infestation was so severe that it was killing leaves and the insects themselves wer falling off the trees onto the ground. In a number of cases leaves affected with the scale insects in all stages were being shed because of the severe infestation. A man driving along with an uncovered load of nursery stock would park his car under the shade of such an overhanging tree, if there was a choice, so as to protect nursery stock from the heat of the sun while he attended to other business before going on to the place where he was to plant the trees. In some cases quite possibly the only place he could find to park his car would be under such an overhanging tree. In the case of trees that hang low the nursery stock could actually interlock with the low overhanging trees. In other cases the breeze would blow off infested leaves which were just about ready to drop and they would light in the uncovered nursery stock and the young insects would promptly transfer to the new host. It is altogether out of the question therefore to sanction the general movement of nursery stock in an uncovered condition."

On August 10th he received the following letter:

"Dear Plant Board:

"Last spring we set 500 strawberry plants to raise plants for our own use. It appears now that we shall succeed so well we shall have a few to sell.

"Today Judge Therien contracted for 10,000 of those same plants. When planting time comes the Judge will bring a collection of various sized boxes, pans and cans and we will fill them. He can only use a few each day. But on every box, pan or can we will fasten one of those emblems of Liberty.

"When the Judge starts for home we will carefully cover each box, pan or can with a bed quilt, for we fully realize the great importance of Rule 40 regarding strawberry plants.

"Suppose the Judge should stop his horse to rest 'neath the shade of an overhanging strawberry plant (the Judge doesn't own a car), and a lot of red ants should drop from that over-

hanging plant right among the plants in his wagon. Wouldn't he swear when he handled those plants?

"I think we had better cover the Judge too. A wild cat might spring from the foliage of that overhanging strawberry plant and get him. Wouldn't that be awful?

"But no matter what happens I will cheerfully and gladly write you; for you know we have lots and lots of time during the planting season. "Your obedient servant,

"Signed) ————————"

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